DOCUMENT RESUME

ED 132 495 CG 011 085

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TITLE Task Satisfaction and Interpersonal Cohesiveness Among Laterally Divided Command Teams.
PUB DATE [72]
NOTE 11p.; Paper presented at the annual meeting of the Midwestern Psychological Association (Chicago, Illinois, May 6-8, 1976)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Conflict Resolution; *Decision Making; *Group Dynamics; Management Systems; Organizational Communication; *Problem Solving; Psychological Studies; Research Projects; Simulation; Speeches; *Task Performance; *Teamwork

ABSTRACT

Ninety-six males participated in four-man teams involved in a complex decision making task. Subteams with differing functions but equal rank were established. Subteams either were or were not physically separated during the tasks. Group cohesiveness was not effected, but subteam task satisfaction differences were greatest when subteams remained together. (Author)

TASK SATISFACTION AND INTERPERSONAL COHESIVENESS AMONG LATERALLY DIVIDED COMMAND TEAMS

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The technology of today's modern world often dictates that teams of people working on a common project divide into subgroups in order to operate more efficiently. Such team subdivision is often lateral rather than hierarchical, and may occur at command levels. For example, Walton, Dutton, & Fitch (1966) studied a large manufactoring organization which required decision making cooperation on the part of equally ranked production and sales managers. The organization furnished no direct authority figure to whom these individuals might appeal for arbitration of disagreements. The efficiency of the organization therefore depended upon the extent to which the two managers could coordinate their efforts. The advantage of a command team such as this, according to Walton, et al., is that it encourages more equal representation of each of the major functions of the organization at command levels, and also results in better morale within the organization.

Katz & Kahn (1966) agree that lateral division of teams can be advantageous. These authors indicate that purely hierarchical divisions of labor at the command levels of large organizations are likely to prove inefficient, and that the organizations which are most effective are those in which leadership functions are widely shared.

Given that the decision is made to divide a command team into subteams faced with differing specific duties, a question arises concerning just how the division should be made. The work with communication nets has shown that restriction of communication often causes dissatisfaction among team members---expecially among the members furthest removed from the decision making process (e.g. Kelley, 1951). Various authors have argued that this dissatisfaction among peripheral members stems from lack of clarity about how the group is doing (Raven & Rietsema, 1957) , lack of opportunity to participate in the final process of decision making (Shaw 1954, Heise & Miller, 1951); or from restricted independence of action (Shaw, 1964).

Despite these findings in communication net research, other authors maintain that team members with different functions should be separated so that specialization of task is enforced (e.g. Kahn, et al., 1964). Particularly where lateral division of teams is at issue, conflict among team members appears to be greatest where role clarity is minimal (Lyons, 1971). Kahn, et al. (1964) maintain that separation of subteams (and hence, restriction of communication between them) protects role clarity since the subteams are better able to accurately identify where one's task ends and the other's begins.

We are therefore presented with contrasting suggestings regarding the most effective method of dealing with subdivided groups. Certainly the weight of the evidence, in terms of sheer volume of research, points to the communication net formulation. However, communication net studies have typically presented subjects with unrealistically simple problems (see Cartwright & Zander, 1968). We may therefore question whether the pervasive findings of communication net studies may be extended to situations in which complex problems are under consideration.

The present research evaluates the relative advantages and disadvantages of the physical separation of laterally divided command teams which are working to solve complex problems.

METHOD

Subjects

Subjects were 96 male undergraduates from a large midwestern university who were assigned to one of 24 four man teams. Each four-man team was subdivided into two equally ranked dyad subteams. Subjects participated for partial fulfillment of a laboratory requirement of the introductory psychology course.

Procedure

All teams participated in seven consecutive thirty minute periods of a simulated internation conflict. This simulation, developed by Streufert, et al.(1965), confronted the subjects with a Vietnam-War-like situation which they were instructed to solve in a manner favorable to their side. In order to resolve the conflict, subjects took responsibility for military, economic, negotiations, and intelligence gathering decision making in the fictional country of Shamba. During the course of the experiment, subjects were led to believe that they were playing a second team representing the opposing side in the conflict. In reality, the subject teams played against a programmed strategy predetermined by the experimenter. In order to avoid an end effect, subjects were not told when the game would end.

Each four-man team was instructed that its members were to act as equal-rank co-commanders in attempting to resolve the Shamba conflict. After preliminary breifing regarding the nature of the conflict, each team was divided into dyad subteams. One subteam was given primary responsibility for implementing group decisions. This task entailed making final decisions regarding specific troop movements, monetary allocations, etc., and filling out the requisite forms which put these decisions into action.

The second subteam was charged primarily with integrating incoming information and searching for the team's most efficient strategy. This task involved collecting a series of one sentence report forms from the experimenter and piecing them together into a cohesive picture of ongoing events.

Neither subteam was provided authority over the other. Neither was there any formal restriction that the subteams limit their activity solely to the area of their primary responsibility.

Half of the four-man teams were physically separated into assigned dyads. During the course of the conflict, the dyad subteams occupied different experimental rooms and communicated with one another via telephone. This situation had the effect of removing information integrators from the center of decision implementation, but also tended to enforce separtation of function between the subteams. The dyads of the remaining teams were allowed to occupy the same experimental room during the conflict, thus maintaining all team members close to the center of decision implementing and concurrently providing each subteam with the option of performing functions not directly assigned to it.

At the endo of 7 half-hour periods of play, and before the end of the experiment was announced, task satisfaction and team cohesiveness were measured using the Job Descriptive Index (Smith, Kendall, & Hullin, 1969). This index is composed of two scales. The first is an adjective checklist which the subject uses to describe his feelings toward his assigned task. The second is a similar checklist upon which the subject's feelings toward his co-workers are described. Each team member completed the Job Descriptive Index independently of the other team members.

RESULTS

A 2 (subteam function) X 2 (degree of separation) factorial analysis of variance was performed on the dependent measures. No significant differences were found for group cohesiveness. Analysis of task satisfaction scores revealed a significant Function main effect ($p < .005$) as well as a Function X Separation interaction ($p < .05$). Inspection of group means (Table 1) shows that the main effect is due to greater task satisfaction among decision implementors. Newman-Keuls probe of the interaction revealed that the difference in task satisfaction between implementors and integrators is significant only when the subteams are together throughout the game.

TABLE 1

Mean Task Satisfaction Scores[a]

		SEPARATION		
		Together	Apart	Marginal
FUNCTION	Decision Implementors	38.87[c]	34.92	36.89[b]
	Information Integrators	30.42[c]	33.37	31.89[b]
	Marginal	34.64	34.14	

[a] high scores signify high task satisfaction

[b] significant main effect

[c] Significant difference by Newman-Keuls

DISCUSSION

Classical communication net formulations would have predicted the greatest difference in task satisfaction between decision implementors and information integrators in the Apart condition. Instead, differences in task satisfaction were significant only when the two subteams were together. Such a finding is most easily explained in terms of role clarity and independence of action. Consider first of all the role of information integration. Communiques came in individually and were quite simple. As a result, most integrator subteams in the together condition simply read the messages out loud to everyone in the room. Having accomplished this, there was little else to do. The integrators in the together condition did have the option of assisting with implementation, but it was not their primary responsibility. As a result, integrators in the together condition may have been unsure of what the boundaries of their task were.

Integrators in the separated condition seemed to have little difficulty defining their task. Their removal from the site of implementation provided them with the time necessary to receive a communique, consult among themselves, plot alternate strategies, and only then contact the implementors with the information and a suggested course of action. For the integrators, the separate condition resulted in greater role clarity than did the together condition. Interestingly, this role clarity resulted from increased independence of action. Shaw (1964) cites independence of action as essential to task satisfaction. However, Shaw argues that restricted communication typically reduces the independence of those at the periphery of the net. The opposite effect is seen here.

Finally, it should be noted that the "subteam separated" condition tended to reduce task satisfaction among implementors even as it tended to increase satisfaction among integrators. Again, independence of action seems to be the key. In the separate

condition, implementors were much more reliant upon the integrators choosing to forward information. In the together condition, implementors were immediately aware of all information which was addressed to the team.

In conclusion, this experiment shows that restricted access of team members to one another does not necessarily reduce team task satisfaction. The effect of restricted communication appears to be dependent upon the nature of the problem confronting the team, and the nature of the task set before any part of the team. In determining specific effects in specific situations. the general variable of interest appears to be what Shaw (1964) has labled "capacity for independent action". In any given situation, to the extent that this capacity can be maximized for all team members, satisfaction will be maximally high.

The results, then, imply that decentralized communication nets do not necesarily encourage independence of action. Where there is danger of usurpation of power by one subteam, the integrity of the threatened subteam should be protected. Such protection will lead to a more equal distribution of task satisfaction within the team. Perhaps more importantly, other data has shown that when usurpation of power is possible, the stronger subteam may overextend its capabilities with a resultant breakdown of efficient decision making processes (Streufert, Cafferty, & Cherry, 1972).

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